20031022.ba v03_n558.bam.20031022

>From ???@??? Wed Oct 22 14:04:02 2003 -0600
Message-Id: <200310221903.h9MJ3plH029034@sco.theporch.com>
Date: Wed, 22 Oct 2003 14:03:15 CDT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 3558

BOATANCHORS Digest 3558

Topics covered in this issue include:

1) Article in Nov QST by Bob AA8A
by "David L. Thompson" <thompson@mindspring.com>
2) Re: 73, 73
by David Stinson <arc5@ix.netcom.com>
3) Questions About National HRO-50T
by Liles and Naomi Garcia <landn@easystreet.com>
4) Update: Question- BA Power Transformer Rewinding
by WA1KBQ@aol.com
5) Re: Questions About National HRO-50T
by Edward Knobloch <k4pf@juno.com>
6) Ranger II mod
by Edward Knobloch <k4pf@juno.com>
7) NC-183D power transformer
by "Jose V. Gavila" <eb5agv@ctv.es>
8) Re: NC-183D power transformer
by "Arden Allen" <gumbear@pacbell.net>
9) Re: NC-183D power transformer
by "Hue Miller" <kargo_cult@msn.com>
10) Re: NC-183D power transformer
by "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
11) Warped plastic dial-fix
by "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
12) BC-464 battery receiver
by "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
13) Re: NC-183D power transformer
by "John K9UWA" <k9uwa@arrl.net>
14) Re: NC-183D power transformer
by "Arden Allen" <gumbear@pacbell.net>
15) RE: Line Voltage WAS: NC-183D power transformer)
by "Merz Donald S" <merz.ds@mellon.com>
16) Re: NC-183D power transformer
by W7QHO@aol.com
17) Re: NC-183D power transformer
by Heinz und Hannelore Breuer <hbreuer@debitel.net>
18) RE: Line Voltage

by Ralph Parker <rparker@dccnet.com>
19) Re: Line Voltage
by WA5CAB@cs.com
20) Re: Transformer cooling
by Ralph Parker <rparker@dccnet.com>

Message-ID: <008301c39798$83de1a20$c88b56d1@default>
From: "David L. Thompson" <thompson@mindspring.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Article in Nov QST by Bob AA8A
Date: Tue, 21 Oct 2003 01:59:38 -0400

Bob Login has an excellent article on his homebrew KW AM rig in this months QST. Uses his 32V to drive a pair of 4-400's modulated by a pair of 813's. Looks good Bob. Since he used the 100 watt + 32V2 he had to add an attentuator to cut the driving power down to a couple of watts.

I did the same driving my single 4-400A with a Eldico SSB-100A. I uses a bunch of 2 watt resistors to make a 50 ohm dummy load and put it in a chassis with coax connectors on both ends. This was inserted between the exciter and the amp. I had plenty of drive for 1000W pep SSB and 600w CW.

73 Dave K4JRB

Message-ID: <3F94E2B7.95E0AEFD@ix.netcom.com>
Date: Tue, 21 Oct 2003 02:39:35 -0500
From: David Stinson <arc5@ix.netcom.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: 73, 73
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hue Miller wrote:
> (Wayne Green) shepharded very interesting magazines for
> many years, for which he deserves more recognition
> and honor; hard facts are not the cheerleader or MC's role.

"Damn an eye-witness, anyway.
They know how to ruin a good story."
Anon

Message-ID: <3F94F169.9000807@easystreet.com>
Date: Tue, 21 Oct 2003 01:42:17 -0700
From: Liles and Naomi Garcia <landn@easystreet.com>

MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Questions About National HRO-50T
Content-Type: text/plain; charset=us-ascii; format=flowed
Content-Transfer-Encoding: 7bit

Good evening National Experts,

I have a friend that has a National HRO-50T for sale. He will have it
at a swap meet this weekend. He also has nine coils for it. Since it
is a " HRO-50T ", it has a table top case, and my friend has the case
for it along with its matching speaker. His receiver is not the HRO-50T-1.

I am not a National expert, but my friend has a 50 to 54 MHz coil for
his HRO-50T, and his receiver has a 50 to 54 MHZ scale on it. Is this
possible with the HRO-50T?? I have been researching my ARRL Handbooks,
and the HRO-50 pages do not say anything about the HRO-50 covering 6 meters.

Do later production HRO-50's cover 6 meters and have the proper dial scale?
Does my friend by chance have an HRO-50T, but have HRO-60 coils (
possibly acquired from various swap meets)? But what about the 6 meter
dial scale on his HRO-50T?
My friend is a ham and he would not read the front of his receiver
incorrectly? Is there a chance that the metal markings got changed on
his receiver, and he really has an HRO-60? Can someone help me out with
these questions? Many thanks in advance for your help.

Regards from Aloha, Oregon,
Liles Garcia
landn@easystreet.com

From: WA1KBQ@aol.com
Message-ID: <16a.254a6f73.2cc66c7a@aol.com>
Date: Tue, 21 Oct 2003 07:03:22 EDT
Subject: Update: Question- BA Power Transformer Rewinding
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Thanks for all the help everyone. The two National receivers I mentioned
earlier were purchased with replacement transformers already in them. The original
burned out units were still available because the previous owner saved the
old parts. Both receivers are in nice shape and I want to put them back to
original if possible. I recently contacted a couple of folks that offer to do
rewinding, one is a company and the other is an individual and both have been
mentioned here in the recent past. The company said they didn't think they had

specifications for transformers that old so it would be what they call a "takedown job" and the individual said he just puts back what was there. In both cases each job will run around $100 or so. My question is how should I approach getting the original transformers rewound and in your opinion can I get a proper job this way? I would like the rewound units to duplicate the originals. The easiest approach might be to call Peter Dahl or find good used ones but I want to see if I can get these rewound correctly. I think Peter Dahl offers replacements for the more popular models but I have never seen one and I don't know if
they look like the originals or not, and probably not for the older stuff. Perhaps he can rewind but would his rewinding be a "takedown job" also? Since we have to deal with this often enough in this hobby I want to learn where I can get good transformer work. I have others that need to be done also but am starting with the Nationals for now.

Regards, Greg

To: Old Tube Radios <boatanchors@theporch.com>
Cc: boatanchors@theporch.com
Date: Tue, 21 Oct 2003 11:24:48 -0400
Subject: Re: Questions About National HRO-50T
Message-ID: <20031021.112449.1512.0.k4pf@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit
From: Edward Knobloch <k4pf@juno.com>

Liles and Naomi Garcia <landn@easystreet.com> writes:

<snip>
> I am not a National expert, but my friend has a 50 to 54 MHz coil
> for
> his HRO-50T, and his receiver has a 50 to 54 MHZ scale on it. Is
> this
> possible with the HRO-50T?? I have been researching my ARRL
> Handbooks,
> and the HRO-50 pages do not say anything about the HRO-50 covering 6
> meters.

Hi,

The HRO-50 had optional band coverage by the use of extra-cost
coil sets, the same as the HRO-60 offered. The coil sets were somewhat
differently calibrated for the HRO-60 on frequencies higher than 7 MHz,
since the HRO-60 has an extra stage of frequency conversion

that only was active above 7 MHz. The coils for an HRO-60
produce a different local oscillator frequency than the HRO-50 needs
above 7 MHz.

You can tell a coil designed for the HRO-60,
because it has a metal i.d. tag in the center of the coil panel,
whilst the HRO-50 coil sets have engraved
information on the panels. HRO-60 coil sets for frequencies
lower than 7 MHz may be plugged into an HRO-50 with no problem,
and vice-versa.

The optional coil sets came with plexiglass dial segments, which could
be attached to the cylindrical dial scale of the HRO-50 or HRO-60
for direct frequency readout.

Generally, coil sets A,B,C,D were furnished with the receiver,
but sometimes AA, B,C,D were furnished (for better 10m sensitivity,
with the loss of general coverage between 14 and 30 MHz.).

73,
Ed Knobloch   k4pf@juno.com

To: Old Tube Radios <boatanchors@theporch.com>
Date: Tue, 21 Oct 2003 16:38:26 -0400
Subject: Ranger II mod
Message-ID: <20031021.163826.1512.5.k4pf@juno.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit
From: Edward Knobloch <k4pf@juno.com>

Hi, Gang

I've seen reference to a QST mod for the Johnson Ranger II
(Sept. 1966 p. 85), but have no idea what that mod involves.

Does anyone have a Sept. '66 QST handy to let me know
what that mod consists of?

Thanks,
Ed   k4pf@juno.com

Message-Id: <3.0.5.32.20031022083841.007d8690@pop.ctv.es>
Date: Wed, 22 Oct 2003 08:38:41 +0200
To: Old Tube Radios <boatanchors@theporch.com>
From: "Jose V. Gavila" <eb5agv@ctv.es>

Subject: NC-183D power transformer
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hello!

Well, it seems my National NC-183D power transformer could be gone (I need to check it)... but I wonder if there is a chance it has just leaked black goo and it is NOT bad as there are no signs of overheated components and fuse was OK. I have read some info about that in an old Newsgroup message.

If so, I could seal the transformer box (it leaks by the joint of the bottom cover) and use it until I locate a proper replacement. I think this problem could be common to other National transformers. Am I right?

Best regards,

JOSE
----
73 EB5AGV / EC5AAU - JOSE V. GAVILA
La Canyada - Valencia (SPAIN)

Vintage Radio: http://jvgavila.com
Vintage Test Equipment: http://jvgavila.com/testeq.htm
European Boatanchors List: http://groups.yahoo.com/group/euro_ba_swap

----
Message-ID: <002201c3987b$eed6cdc0$dee47443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: NC-183D power transformer
Date: Wed, 22 Oct 2003 02:07:30 -0700
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Jose;

> Well, it seems my National NC-183D power transformer could be gone (I need to check it)... but I wonder if there is a chance it has just leaked black goo and it is NOT bad as there are no signs of overheated components and fuse was OK.

You are probably right. After many hours of being warm from operating the tar "cold flows". It's like the tar in the ashphalt pavement on roads. On hot days the road softens and the traffic causes shifting of the asphalt and you get a bumpy road.

The same thing happens with wax impregnated transformers as we all know. There is no harm to the windings and insulation in the transformer. The tar or wax that flows out is excess, there is plenty left to afford whatever protection the impregnant offers to the transformer.

Insulation in a transformer fails due to aging and heat accelerates the aging. Many consumer grade transformers which were used in ham radio equipment are marginal in their heat generation and dissipation characteristics and can run quite hot. Cheap power transformers use cheap laminations with poorer permeability characteristics. The excitation (unloaded) current in such tranformers is quite high and heat is generated in the transformer due to the resistive loss in the windings. Heat is also generated in the poor quality laminations. Under operating conditions such transformers run very hot because they are running at or near their maximum temperature rise characteristic which is set quite high in cheap designs. Some transformers run so hot the insulation simply burns up over time. Good quality transformers run cool (even cold) because there is plenty of excess gauss in the core to keep the inductive reactance high which keeps the excitation current low.

Cheap and hot is the consequence of the cost savings employed to make products more competitive. Power transformers in high quality equipment only get warm. It goes back to the old rule, "there ain't no free lunch."

In specifying a transformer it is important to specify the unloaded primary current at high line voltage. This will guarntee the designer uses enough excess gauss in the core. Also, the temperature rise at full load should be specified so that enough copper will be used. Otherwise the manufacturer will protect his price competitiveness by minimizing the material usage in the design. Expect to pay more for a good qualtiy transformer!

Arden Allen
KB6NAX

From: "Hue Miller" <kargo_cult@msn.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: NC-183D power transformer
Date: Wed, 22 Oct 2003 04:11:28 -0700
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit
Message-ID: <BAY5-DAV139EAkzY9nI0003b197@hotmail.com>

It seems to me that if so many of the consumer-grade
radios had stressed power transformers, a good

approach for their owners today would be to:

1. Set the power transformer input tap to a higher
voltage input setting- if there is a choice
2. change to solid state diode (to remove the filament
load of the rectifier)
3. change to choke input filter
4. and generally try to run on lower B+. These original
operating voltages, except for oscillator stages, are not
that critical.

-Hue Miller

Date: Wed, 22 Oct 2003 08:28:01 -0400 (EDT)
From: "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
Message-Id: <200310221228.IAA20680@aa4rm.ba-watch.org>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: boatanchors@theporch.com, gumbear@pacbell.net, kargo_cult@msn.com
Subject: Re: NC-183D power transformer

Hi Jose.

Hue's ideas good 'uns BUT here's how to check that xfrmr w/o first learning a new trade (like asking the time & 1st getting a watchmaking lesson - hint Arden)

take out all tubes & series a 60W light NC-183's line cord. If bulb goes right out, xfrmr OK even tho tar's flowed.

Then measure line volts. If < 115V go ahead & use set w. confidence after bad-C stuff done. If not, put, say, 12V 1A xfrmr in series-buck w. xfrmr primary

---BECAUSE, & requiring reason never mentioned---

those radio power xfrmr cores saturate above 117* or so volts & power shows up as heat. Heat which might have beat the tar outa the NC183 transformer. A good 12V 1A source are the 'big wall warts' that appear everywhere.

Transformer makers out to make $$$.   Widening safety margins with extra core 'meat' was then, as now, unwanted.

Of course a former owner may have just run the thing against some leaky/shorted under-chassis capacitors. And, here's reference to the bad-C stuff again. Jose do try the series R electrolytic-reform & leaky-C-detection process I wrote up Sunday.

Do that right after ur xfrmr passes the 'bulb test'

What was I saying about watchmaking?

Marty

*here's an opportunity for VARIAC FUN! Series a bub with some arbitrary 117V transformer & watch the bulb brighten up a lot when pri. voltage rises above ~125V

Date: Wed, 22 Oct 2003 08:40:56 -0400 (EDT)
From: "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
Message-Id: <200310221240.IAA20697@aa4rm.ba-watch.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Warped plastic dial-fix

Never thot possible but Sunday I tried process here found on web for LPs.

Had a badly warped dial-disk from Westinghouse 'refigerator radio.'
The little ~1947 octal-tube giz that really looks like a 'fridge.

Put that dial disk sucker between two pieces of glass & left in sun w. weights on top glass. Dang it it wasn't flat in an hour !!

& it stayed that way overnight & it still is after 2 days radio use.

And note this. It's twist-lock electrolytic did not reform since it apparrently dried out.

Date: Wed, 22 Oct 2003 08:51:14 -0400 (EDT)
From: "Marty's Refl. Drop" <polepeeg@aa4rm.ba-watch.org>
Message-Id: <200310221251.IAA20713@aa4rm.ba-watch.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BC-464 battery receiver

Anyone out there have one? It's later name was R-116 / ARW-26

Also snooping for a BC-1262 later called C-16/TRW-1

Further has anyone in the world ever seen a MRW-4? I've got a book for this 30-42 mcs hulk that ends up w. 2 4E27s. Book dated 1954 but clearly a WW2 critter since not one miniature tube.

And here's another one. A book for the R-64/ARW-17. Not so obviously u/w above thing.

If anyone wants to know how or what these critters did, I'll drone on in private.

A clue is there's nothing here to do with internet radio simulation.

This is a funded project.

Marty

From: "John K9UWA" <k9uwa@arrl.net>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Wed, 22 Oct 2003 08:26:57 -0500
MIME-Version: 1.0
Subject: Re: NC-183D power transformer
Message-ID: <3F963F51.9669.233372B4@localhost>
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT
Content-description: Mail message body

> It seems to me that if so many of the consumer-grade
> radios had stressed power transformers, a good
> approach for their owners today would be to:
>

Hue has it about right. I do around 150 consumer radios per year... Zenith was the absolute worst for their power trannies... just barely good enough! They all saturate badly at 122 volts.... and somewhat even at 110 volts.

Normally I use 40 watt series resistor in the AC line if there is room under the chassis to hide the resistor where it won't cook something else. If radio has motor drive in it... then resistor only in tranny line. Buck transformer is also useful but most that I do need more than a 12 volt lose...

If you ever work on radio with 6X5 rectifier... best thing to do with that one is break glass and install coupla diodes ... besides 2 amp 6 volt draw... the default when it quits is cathode to plate short inside toob... takes power tranny out in about 10 seconds. Lousy toob was a way to cheapen the tranny by only having 2 secondaries 6.3 and HV... even back then damned bean counters were running the companies.

John k9uwa

John Goller, K9UWA & Jean Goller, N9PXF
Antique Radio Restorations

k9uwa@arrl.net
Visit our Web Site at:
http://www.JohnJeanAntiqueRadio.com
4836 Ranch Road
Leo, IN 46765
USA
1-260-637-6426

Message-ID: <002c01c398a5$1588d2a0$9de57443@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: NC-183D power transformer
Date: Wed, 22 Oct 2003 06:56:45 -0700
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Hue;

> It seems to me that if so many of the consumer-grade
> radios had stressed power transformers, a good
> approach for their owners today would be to: ....

Better to make measurements in your treasured rigs so that if the power transformer fails you have the specs to order a replacement.

Arden Allen
KB6NAX

Message-ID: <20031022160651.5189.qmail@mellon.com>
content-class: urn:content-classes:message
MIME-Version: 1.0
Content-Type: text/plain;
     charset="iso-8859-1"
Content-Transfer-Encoding: base64
Subject: RE: Line Voltage WAS: NC-183D power transformer)
Date: Wed, 22 Oct 2003 12:02:00 -0400
From: "Merz Donald S" <merz.ds@mellon.com>
To: Old Tube Radios <boatanchors@theporch.com>

T0suIEVub3VnaCBhbHJlYWR5Li4udHJhbnNmb3JtZXJzIHNhdHVyYXRpbmcgYWJvdmUgMTE3Vi4u
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cyAxMDUgdm9sdHMgdG9vIGxvdz8gV2hhdCBpcyB0aGUgImNvcnJlY3QiIHZvbHRhZ2UgZm9yIHBy
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dGlvbmVkLS0tDQoNCnRob3NlIHJhZGlvIHBvd2VyIHhmcm1yIGNvcmVzIHNhdHVyYXRlIGFib3Zl
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bWlnaHQgaGF2ZSBiZWF0IHRoZSB0YXIgb3V0YSB0aGUgTkMxODMNCnRyYW5zZm9ybWVyLiAgQSBn
b29kIDEyViAxQSBzb3VyY2UgYXJlIHRoZSAnYmlnIHdhbGwgd2FydHMnIHRoYXQNCmFwcGVhciBl
dmVyeXdoZXJlLg0KDQpUcmFuc2Zvcm1lciBtYWtlcnMgb3V0IHRvIG1ha2UgJCQkLiAgIFdpZGVu
aW5nIHNhZmV0eSBtYXJnaW5zIHdpdGggZXh0cmENCmNvcmUgJ21lYXQnIHdhcyB0aGVuLCBhcyBu
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Z2h0IGFmdGVyIHVyIHhmcm1yIHBhc3NlcyB0aGUgJ2J1bGIgdGVzdCcNCg0KV2hhdCB3YXMgSSBz
YXlpbmcgYWJvdXQgd2F0Y2htYWtpbmc/DQoNCiAgIE1hcnR5DQoNCg0KDQogKmhlcmUncyBhbiBv
cHBvcnR1bml0eSBmb3IgVkFSSUFDIEZBTiEgIFNlcmllcyBhIGJ1YiB3aXRoIHNvbWUgYXJiaXRy
YXJ5IA0KICAxMTdWIHRyYW5zZm9ybWVyICYgd2F0Y2ggdGhlIGJ1bGIgYnJpZ2h0ZW4gdXAgYSBs
b3Qgd2hlbiBwcmkuIHZvbHRhZ2UgcmlzZXMgDQogIGFib3ZlIH4xMjVWIA0KRElTQ0xBSU1FUjog
DQpUaGUgaW5mb3JtYXRpb24gY29udGFpbmVkIGluIHRoaXMgZS1tYWlsIG1heSBiZSBjb25maWRl
bnRpYWwgYW5kIGlzIGludGVuZGVkIHNvbGVseSBmb3IgdGhlIHVzZSBvZiB0aGUgbmFtZWQgYWRk
cmVzc2VlLiBBY2Nlc3MsIGNvcHlpbmcgb3IgcmUtdXNlIG9mIHRoZSBlLW1haWwgb3IgYW55IGlu
Zm9ybWF0aW9uIGNvbnRhaW5lZCB0aGVyZWluIGJ5IGFueSBvdGhlciBwZXJzb24gaXMgbm90IGF1
dGhvcml6ZWQuIElmIHlvdSBhcmUgbm90IHRoZSBpbnRlbmRlZCByZWNpcGllbnQgcGxlYXNlIG5v
dGlmeSB1cyBpbW1lZGlhdGVseSBieSByZXR1cm5pbmcgdGhlIGUtbWFpbCB0byB0aGUgb3JpZ2lu
YXRvci4oQSkgDQogDQo=

From: W7QHO@aol.com
Message-ID: <77.1b36182f.2cc808a5@aol.com>
Date: Wed, 22 Oct 2003 12:21:57 EDT
Subject: Re: NC-183D power transformer
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0

```
Content-Type: multipart/alternative;
boundary="part1_77.1b36182f.2cc808a5_boundary"


--part1_77.1b36182f.2cc808a5_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Getting back to Jose's NC-183D, it's likely that the unit had been operated
for some unknown period of time on 50 Hz power.

Dennis D.   W7QHO
Glendale, CA


--part1_77.1b36182f.2cc808a5_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---            *
*     This post contains a forbidden message format       *
*  (such as an attached file, a v-card, HTML formatting)  *
*    Mail Lists at theporch.com only accept PLAIN TEXT    *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

--part1_77.1b36182f.2cc808a5_boundary--

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Message-ID: <3F96B8FE.8EB0AFA8@debitel.net>
Date: Wed, 22 Oct 2003 19:07:12 +0200
From: Heinz und Hannelore Breuer <hbreuer@debitel.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: NC-183D power transformer
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

W7QHO@aol.com wrote:
>
>
> Getting back to Jose's NC-183D, it's likely that the unit had been
> operated for some unknown period of time on 50 Hz power.
>
> Dennis D.   W7QHO
> Glendale, CA
```

Very good point. If it is specified for 60Hz only the iron is about 20% too small for 50Hz and saturates. Even to solid state the power supply to reduce the load would not help because for 50 Hz I need more windings per volt too.
Is there an easy way to get over this? In Germany we have 230V/50Hz and a couple of boatanchors in my collection are specified 60Hz only. Well I could pour a few cubic yards of concrete behind the house and install a ship's diesel and a generator but I am afraid the XYL will not tolerate that unless it is whispering quiet. A computer type UPS (uninterrupted power supply) might serve my receivers one at a time but will not power up the Collins KW-1 at 3kVA.

73
Heinz DH2FA, KM5VT

Message-Id: <3.0.5.32.20031022105907.008434c0@pop3.dccnet.com>
Date: Wed, 22 Oct 2003 10:59:07 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Ralph Parker <rparker@dccnet.com>
Subject: RE: Line Voltage
Mime-Version: 1.0
Content-Type: text/plain; x-avg-checked=avg-ok-7F0CDA8; charset=us-ascii

>I have always run all my BA gear on Variacs set to 105 volts...
>But is 105 volts too low?...

I often use a variac too, usually set to 110v. I also have a couple of 12v xformers set up in a bucking circuit, so my almost 125v line voltage is cut back to 113v (all approximate). My Valiant seems happy with that, and the pwr xfmr runs a little less hot (solid-stating the 866s helped, too). I've got a couple of 15v filament xformers that I'm going to press into service to drop the line a bit more. I can run quite a few BAs from one xfmr.

I've taken to adding an aluminum bracket to many of my pwr xfmrs (top bolts) to help cool the xfmr - seems to work, as the bracket gets warm. Raising the pwr xfmr off the chassis 1/8" to promote circulation is a good idea too.

If you're happy with the performance of the radios at 105v, I don't think they'd mind.

VE7XF

From: WA5CAB@cs.com

Message-ID: <bf.37b9b6eb.2cc8245c@cs.com>
Date: Wed, 22 Oct 2003 14:20:12 EDT
Subject: Re: Line Voltage
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_bf.37b9b6eb.2cc8245c_boundary"

--part1_bf.37b9b6eb.2cc8245c_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Group,

Cooling fins will always help (unless the gas that they are surrounded by is at a higher temperature than the source being cooled). But I'm not sure that introducing an air gap between the bottom of a transformer and the chassis will help. There are (excluding chemical and nuclear reactions) three standard ways to transfer heat from a warmer to a cooler volume, conduction, convection and radiation. Of the three, conduction is usually the most efficient when the convection working fluid is air at one atmosphere (did I get enough weasel words in there?).

With the transformer more or less solidly bolted to and touching the chassis, heat transfer will occur between the bottom of the transformer and the chassis which will conduct it away as though it were a relatively large heat sink. With the transformer spaced off of the chassis by a small amount, the only conduction will be through the attaching bolts and spacers, and if the chassis surface is horizontal there will be little or no air flow between it and the transformer unless flow is driven by some other means (fan, etc.). I would also guess that spacing the transformer and blowing air under it would be less efficient than blowing the same amount of air over the much larger surface area of the surrounding chassis.

Another thought that occurred to me is that removing the endbells (if practical) would also help, although I have no idea what the magnitude of the improvement would be - probably small.

In a message dated 10/22/2003 12:59:45 PM Central Daylight Time, rparker@dccnet.com writes:

> I've taken to adding an aluminum bracket to many of my pwr xfmrs (top
> bolts) to help cool the xfmr - seems to work, as the bracket gets warm.
> Raising the pwr xfmr off the chassis 1/8" to promote circulation is a good
> idea too.

73
Robert Downs - Houston

<http://www.wa5cab.com>
<wa5cab@cs.com>

--part1_bf.37b9b6eb.2cc8245c_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*         ---REMAINDER OF MESSAGE TRUNCATED---           *
*     This post contains a forbidden message format       *
*  (such as an attached file, a v-card, HTML formatting)  *
*    Mail Lists at theporch.com only accept PLAIN TEXT    *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting  *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

--part1_bf.37b9b6eb.2cc8245c_boundary--

Message-Id: <3.0.5.32.20031022120353.00849a70@pop3.dccnet.com>
Date: Wed, 22 Oct 2003 12:03:53 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Ralph Parker <rparker@dccnet.com>
Subject: Re: Transformer cooling
Mime-Version: 1.0
Content-Type: text/plain; x-avg-checked=avg-ok-7F0CDA8; charset=us-ascii

>...I'm not sure that introducing an air gap between the bottom of a
>transformer and the chassis will help...
>With the transformer more or less solidly bolted to and touching the chassis,
>heat transfer will occur between the bottom of the transformer and the
chassis

Excellent point, Robert, I'd overlooked that entirely.
I read some time ago that raising the xfmr would improve circulation,
including through the wire hole beneath, but I forgot about the conduction
afforded by the chassis. I'll stick with the added fins.
Is it too late to retract my comments?

VE7XF

End of BOATANCHORS Digest 3558
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